Managing Emergent Invasive Populations:

Stinknet in the California Sonoran Desert

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Oncosiphon pilulifer

- Annual herb with round yellow flowers
- Dissected leaves; pinnate
    - Resin glands
- Strongly-scented; pungent
- "Globe chamomile" and/or stinknet
- Asteraceae
- +/- 2 ft (60 cm) tall

Weed Alert! Stinknet

www.cal-ipc.org

Stinknet

(*Oncosiphon piluliferum*)

Mature Size Knee

Description

- 1-2 ft. many-branched annual with small yellow flowers and a vile odor
- Globe-shaped flowerheads have no petals and are up to 1/3 in. wide
- One flower at the end of each stem
- Leaves are alternate, finely dissected, and dotted with resin glands
- Leaves become smaller toward the top, and have fine hairs
- Stems are green to reddish-brown
- Reproduces by seed
- Spread by wildlife, wind, water, equipment, horticulture
- Native to South Africa

Bloom Period Mar - Jul

Habitat Desert, grassland, coastal scrub, chaparral, disturbed sites

2-Minute Removal Pull

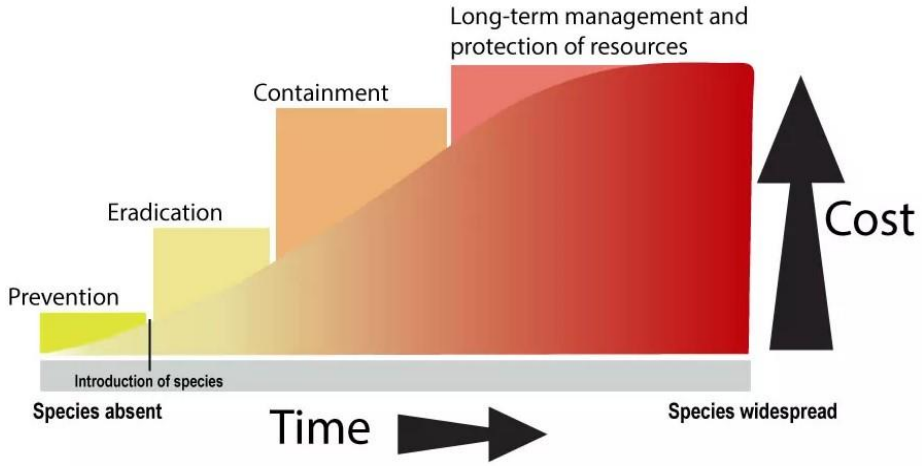
Image credits: Front top: Phillip Ruttenbur, Front center/bottom and back bottom: Katherine Darrow, Back top: Richard Spellenberg; icons by Tim Hyland
These cards were adapted from a design by National Park Service.

Stinknet: Overview

- Native to South Africa
- First appeared in Southern California around 1980
- Appeared and established in Arizona in the late 90s to early 2000s
- Started to spread into the Coachella Valley in the 2010s
- **Fast generation times with sufficient rainfall**

Early Detection, Rapid Response (EDRR) Overview

- Effective eradication of invasive populations begins when they are still small
- Prevention vs Mitigation
- Cal-IPC surveillance lists - **Cal-IPC Rating: High**
- Land managers should develop a plan tailored to their specific region



www.nps.gov

Stinknet: Herbicide

- Herbicide can be effective depending on management needs:
  - Garlon3A (Triclopyr3)
  - Trichlopyr4
  - Diquat
  - No to glyphosate*
    - With surfactant can be effective post emergence

ACTIVE INGREDIENT:	% BY WT.
*Triclopyr BEE: (3,5,6 Trichloro-2-Pyridinyl) oxyacetic acid, butoxyethyl ester	61.6%
OTHER INGREDIENTS:	38.4%
TOTAL:	100.0%

Contains petroleum distillates
*Contains 4 pounds of triclopyr acid equivalent per gallon (44.3%)

ACTIVE INGREDIENT:	
Diquat dibromide [6,7-dihydrodipyrido (1,2-*a*:2',1'-*c*) pyrazinediium dibromide]	37.3%
OTHER INGREDIENTS:	62.7%
TOTAL:	100.0%

Contains 2 lbs. diquat cation per gallon (3.73 lbs. of diquat dibromide per gallon).

GROUP	4	HERBICIDE

Active Ingredient:	
Triclopyr: 2-[(3,5,6-trichloro-2-pyridinyl)oxy] acetic acid, triethylamine salt	44.4%
Other Ingredients	55.6%
Total	100.0%

Acid equivalent: triclopyr - 31.8% - 3 lb/gal

Portrait of a Pest

- Irritant
    - Resin can produce rashes; severity varies
    - Can induce asthma in large stands and/or when burned; caustic
- Poor substitute for grazing- reduces palatable ruffage
- Vulnerable plant species - *Astragalus lentiginosus var. coachellae*
- Coachella Valley:
    - Fear of spread onto Pacific Crest Trail and into sky islands
    - Displacing already vulnerable plant populations

Astragalus lentiginosus var. coachellae

Higher Taxonomy

Family: Fabaceae (Leguminosae)	View Description	Dichotomous Key
Genus: Astragalus	View Description	Dichotomous Key
Species: Astragalus lentiginosus	View Description	Dichotomous Key

***Astragalus lentiginosus* Douglas var. *coachellae* Barneby**

NATIVE

Habit: Annual, perennial herb, densely silvery-hairy. **Stem:** ascending, clumped, 1--3 dm. **Leaf:** 5--11.5 cm; leaflets 7--21, 5--17 mm, +- widely ovate. **Inflorescence:** flowers 11--25; axis in fruit 3--10 cm. **Flower:** petals pink-purple, banner 12.7--14.5 mm, keel 10.8--11.6 mm. **Fruit:** 16--21 mm, 9--14 mm wide, greatly inflated, +- gray strigose, stiff-papery; beak 3.5--6 mm.

Ecology: Sand; **Elevation:** < 650 m. **Bioregional Distribution:** DSon (Coachella Valley). **Flowering Time:** Feb--May **Note:** Threatened by vehicles, development.

Jepson eFlora Author: Martin F. Wojciechowski & Richard Spellenberg

Reference: Barneby 1964 Mem New York Bot Gard 13:1--1188; Isely 1998 Native and Naturalized Leguminosae (Fabaceae) of the United States

Index of California Plant Names (ICPN; linked via the Jepson Online Interchange)

Listed on CNPS Rare Plant Inventory

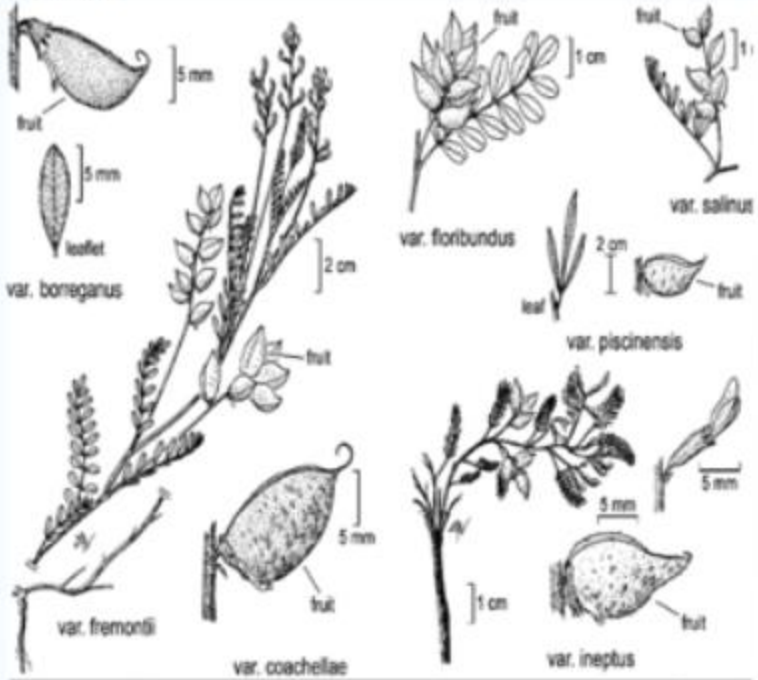
List of species: click here

Previous taxon: Astragalus lentiginosus var. chartaceus

Next taxon: Astragalus lentiginosus var. floribundus

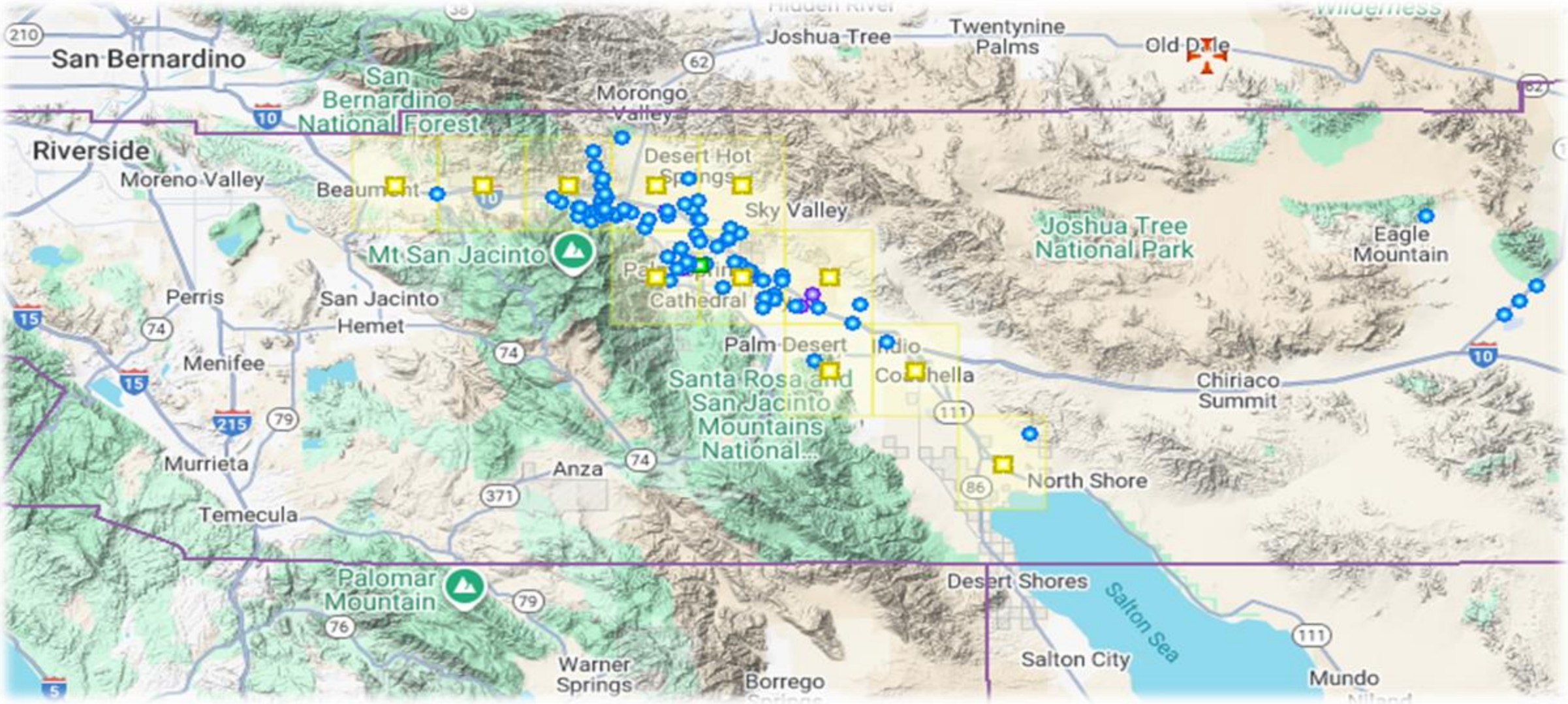
Name Search: Submit Name

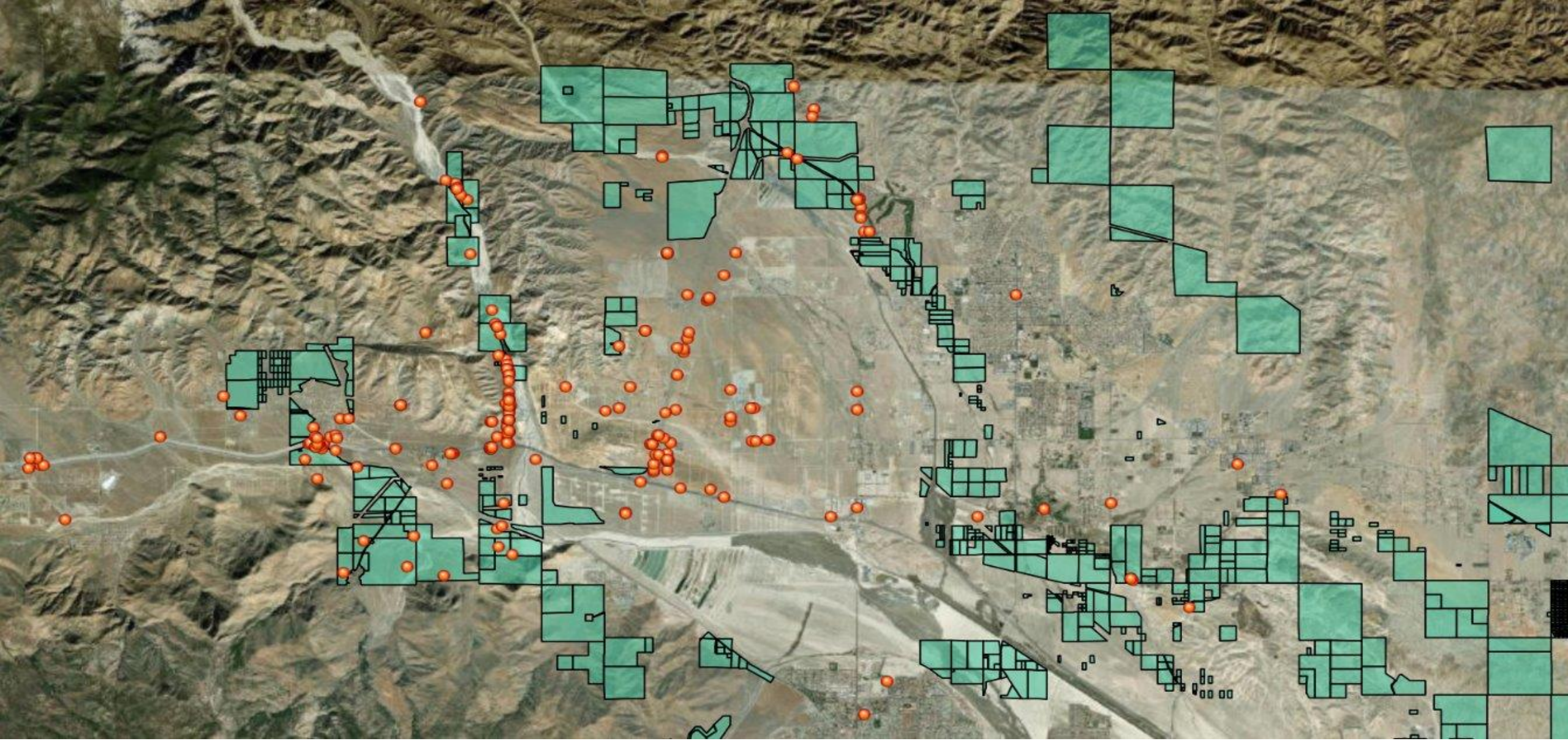
Botanical illustration including *Astragalus lentiginosus var. coachellae*



Astragalus lentiginosus

Astragalus lentiginosus var. coachellae cont.




iNaturalist Stinknet Observations
Coachella Valley
Conservation Land


2024 Stinket Survey
February-May
5.07.24 Stinknet
3.19.24 Stinknet
3.08.24 Stinknet
2.29.24 Stinknet
2.23.24 Stinknet
2.23.24 Stinknet
Conservation Holdings

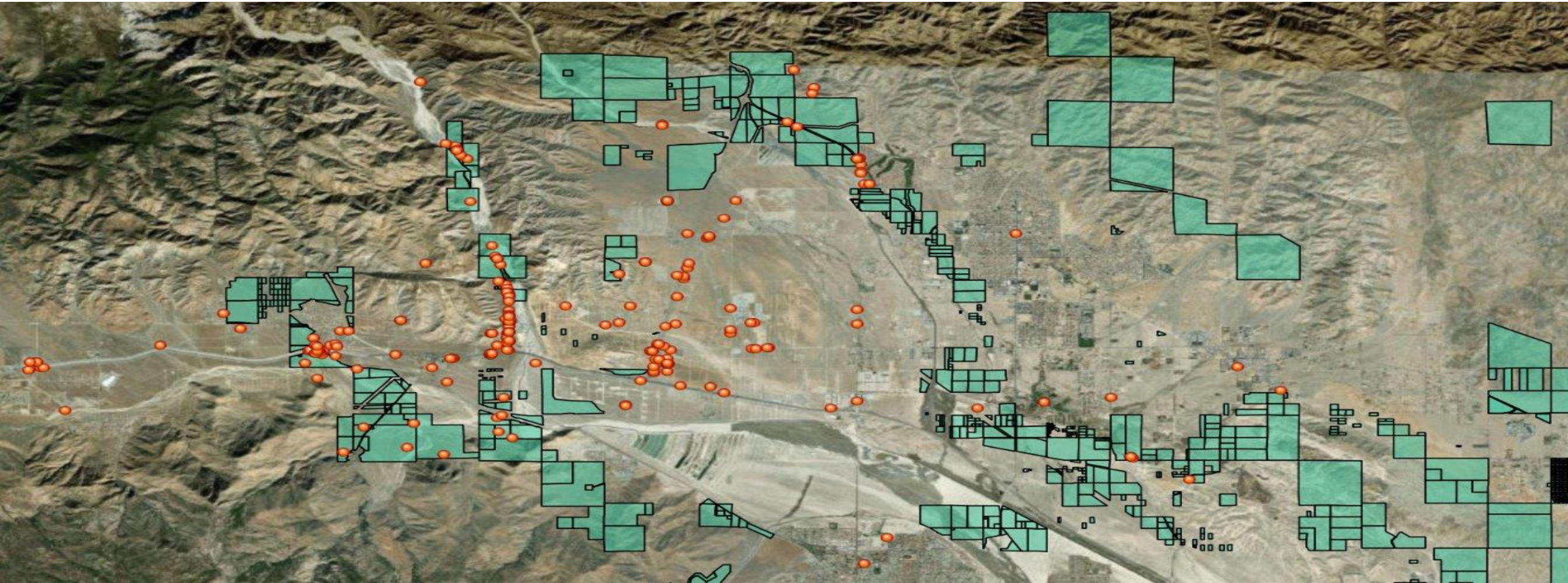
Mission Creek - March

Willow Hole - May


Whitewater Preserve
Pacific Crest Trail
Pacific Crest Trail - Cottonwood Canyon...
Painted Hills
Bonnie Bell
Y & R Home Repair Services
The Desert Shack
On The Spot Paint & Dent Repair
Whitewater
Pacific Crest Trail
Whitewater Repeater Building...
10
10
10
111

Roadblocks:

- **<u>Permitting for land access</u>**
- Scale of certain stands vs available manpower



In Summary:

- **Stinknet has established in the Coachella Valley, but not all is lost.**
- Potential stands have been eradicated using EDRR
- Established stands are being monitored by several special interest groups
- Encroaching on desert habitat broadly;
    - Vulnerable plant populations are important to highlight for:
        - Species conservation
        - Telling a story that might inspire more aid & attention

Thank you!

Special thanks to:

- **Cal-IPC**
- **Coachella Valley Conservation Commission (CVCC)**

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